Entrepreneur—a Jockey or a Horse Owner?

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Entrepreneur—a Jockey or a Horse Owner?

Introduction

The business literature has long been concerned with understanding why people become entrepreneurs and what makes their ventures successful (e.g., Blanchflower and Oswald 1998; Hamilton 2000; Nanda and Sorensen 2010). The literature that studies an individual's decision to become an entrepreneur has, however, mixed together two important issues—founding a new business and being the right person to operate the firm. Up until recently, entrepreneurship scholars have typically assumed that founders run their ventures personally (e.g., Berglann et al. 2011; Hamilton 2000; Nanda and Sorensen 2010). In line with this expectation, the empirical entrepreneurship research has been largely limited to self-employed individuals and owner-managers of incorporated firms while omitting individuals who founded firms but did not manage them (Van Praag and Versloot 2007). Yet it is not clear from either a theoretical or an empirical standpoint why founders should always run their firms themselves (Beckman and Burton 2008). The literature reports plenty of cases where entrepreneurs have great business ideas but lack operational knowledge and suggests, for example, that entrepreneurs with engineering backgrounds may benefit from hiring managers with business skills (Clarysse and Moray 2004; Muller and Murmann 2016; Wasserman 2003).

Recent empirical evidence also demonstrates that a significant share of entrepreneurs delegate firm operation to a hired CEO soon after founding. Beckman and Burton (2008) study the evolution of top-management teams in Silicon Valley high-technology start-ups and note that founders do not always hold top-management positions in their firms. Kaplan et al. (2009) examine a sample of 50 US firms and find that 34 percent of them had hired CEOs at the time of the business plan. Kulchina (2016) and Kulchina and Oxley (2017) show that in Russia close to 40 percent of nascent small businesses have hired CEOs. Similarly, we observe that 10 percent of start-ups in Denmark have hired managers at the time of founding.

The choice of the top manager is a critical decision for entrepreneurs since early managers have profound and long-lasting impact on start-up performance (Beckman and Burton 2008; Graffin et al. 2013). Whether the founder is an optimal manager for his or her firm strongly depends on the founder's motives for retaining managerial control, i.e., whether the founder's decision to operate the firm personally is driven by expected non-pecuniary benefits of management or by more strategic considerations. In our paper, we examine what motivates entrepreneurs to actively engage in operating their firms as opposed to confining themselves to the founding role and hiring a manager.

Agency theory predicts that, all else equal, owners should be the best managers for their firms because their incentives are well aligned with firm performance (Jensen and Meckling 1976). Recent work, however, criticizes this view by saying that in closely held firms, owners may have nonpecuniary motives for retaining control that are not necessarily aligned with profit maximization (Gomez-Mejia et al. 2007; Wasserman 2017). Indeed, a founder may not always be the best person to manage his or her business (Wasserman 2017). Prior literature demonstrates that investors commonly replace founder-CEOs at major firm-development milestones and the transition from owner-management to professional management positively affects investors' valuations and firm performance (Bennedsen et al. 2007; Chang and Shim 2014; Wasserman 2017). Investors' preference for professional managers is not surprising, given that entrepreneurs are often criticized for having limited business expertise and placing personal motives ahead of financial returns (e.g., Chen and Thompson 2015; Clarysse and Moray 2004; Gomez-Mejia et al. 2007).

In this paper, we investigate what motivates entrepreneurs to retain control or delegate firm management to a hired agent at the time of firm founding. We examine the role of the founders' relevant knowledge and skills, opportunity cost of operating a firm personally, and non-pecuniary benefits of owner-management. We have gathered fine-grained demographic and employment history data on founders and top managers of entrepreneurial ventures started in Denmark between 2001 and 2009. Importantly for our study, the dataset allows us to identify whether the founder serves on the firm's top-management team. We anticipate that if non-pecuniary motives are the prime driver of the decision to become a manager, we will observe a strong impact of non-pecuniary benefits on the entrepreneurs' choice and a weak impact of more strategic considerations, such as relevant prior experience and opportunity cost. Our empirical findings, however, do not support this idea. While non-pecuniary motives play a role in the founders' decision to operate their firms personally, opportunity cost and relevant skills are equally or even more important. Thus, entrepreneurs put significant emphasis on the characteristics that would improve firm performance and their overall wealth. We also observe that when founders do not manage their firms personally, they typically work full-time at another firm or play a non-managing role in their own venture.

Taken together, our findings make several contributions to the entrepreneurship literature. First, we draw attention to the issues of separation of ownership and control and management in ventures founded by entrepreneurs—organizations in which ownership and control have been traditionally assumed to be aligned. We also open a broad area for future research on what founders do in their firms after founding and how the combination of founders' characteristics and firm-related activities may affect venture outcome. Second, our findings speak to the debate on pecuniary and non-pecuniary motives of entrepreneurs. Moreover, we caution empirical studies to be careful when counting top managers of a start-up as founders (e.g., Sorensen 2007) since some of them may be hired employees and their characteristics may bias our understanding of which individuals become entrepreneurs. Additionally, our findings shed light on the behavior of hybrid entrepreneurs—individuals who do not quit their job when they found a start-up (Folta et al. 2010). Finally, our work has implications to the literature on the retention of human capital in established organizations. Our results suggest that high opportunity costs distract founders from quitting their jobs to manage their firms personally. If we assume that salary is positively correlated with employee value, more valuable employees seem less likely to leave their employers even after founding own ventures.

Theoretical Background

Founders and managers

Prior studies define a firm founder as a person who discovered an opportunity (Hmieleleski et al. 2015), established the firm (Eesley et al. 2014; Klotz et al. 2013; Nelson 2003), and owns a significant share[1] of it (Hvide and Moen 2010; Klotz et al. 2013; Lindquist, Sol, and van Praag, 2015; Ruef et al. 2003). Ownership is a core criterion that has been used in the prior work to distinguish founders from early employees (Hvide and Moen 2010; Lindquist et al. 2015; Roach and Sauerman 2015). However, unlike angel investors, who may have limited engagement in the firm beyond financing it, entrepreneurs are expected to both have "significant financial interest" and "participate actively in the development of the enterprise" (Cooney 2005: 229). Thus, the majority of studies identify a founder as the creator and the owner of the start-up (Lindquist et al. 2015; Roach and Sauremann 2015). Yet the extent of the founders' engagement with the firm may also vary. While earlier studies have typically assumed that in early years founders operate their start-ups personally, recent work demonstrates that this should not always be the case and it is quite common for founders to delegate firm operation to hired CEOs soon after founding. For example, Beckman and Burton (2008) study the evolution of top-management teams in Silicon Valley high-technology firms from founding to IPO and note that founders do not always hold top-management positions in young start-ups. Kaplan et al. (2009) examine a sample of 50 young US firms in the biotechnology, software, telecommunication, healthcare, and retail industries and find that 34 percent had a hired CEO at the time of the business plan. Kulchina (2016) and Kulchina and Oxley (2017) track the entire population of small businesses in Russia and observe that close to 40 percent of domestic and foreign firms have non-founder managers at the time of first sales. In our sample of Danish small businesses, we observe that one year after founding, 1,695 start-ups or 10 percent of all newly established

[1] A conservative threshold used in the literature is a 20 percent ownership share (e.g., Villalonga and Amit 2006), but prior studies indicate that founders and co-founders often own more than that. 50 percent and 100 percent founder ownership is quite common (e.g., Hvide and Moen 2010; Kulchina 2016).

ventures are run by hired CEOs instead of entrepreneurs themselves. Non-managing founders are still significantly engaged with building the firm and developing its strategy, but they do this together with their hired managers and are less involved in implementing this strategy and running the firm on a daily basis. Coordination of firm operations and hiring of non-management employees are typically delegated to a hired manager (Kulchina 2016). Prior work suggests that top managers in small businesses have a lot of discretion and power (Miller et al. 2013). Yet non-managing founders bear significantly higher risks and rewards associated with the firm than their hired managers (Roach and Sauerman 2015).

Finding the right manager is one of the most important decisions that founders and directors of an organization make. CEOs make significant contributions to a firm's performance, almost as much as the contribution of everything else inside the firm (Mackey 2008). Top-managers are particularly important in young start-ups since they have a lot of discretion and a long-lasting imprinting effect on the venture (Miller et al. 2013). The literature suggests, however, that founders may not always be the best managers for their firms since they may lack business expertise and make strategic decisions based on their personal motives rather that the best interest of the firm (e.g., Chen and Thompson 2015; Clarysse and Moray 2004; Gomez-Mejia et al. 2007). Nevertheless, founders may hold on to the top-management positions in their firms even if they are not the optimal managers because they derive non-pecuniary benefits from owner-management and are unwilling to share control of their ventures with a hired agent (Kulchina 2016; Wasserman 2017).

Entrepreneurs, thereby, face a significant trade-off when hiring an agent-manager. On the one hand, founders benefit from managers' knowledge and social capital. They also free up personal time, which can be spent on other activities outside or inside the firm. For example, non-managing founders can have outside jobs, be employed at a non-management position in their start-ups and focus on engineering, marketing or financial activities, or, in rare cases, not work at all.[2] On the other hand, founders give up some authority and control over their firms. They are constrained in their ability to make and implement strategic decisions and derive non-financial benefits from their businesses. For example, in many institutional settings, including Denmark, founders are allowed to sign legal documents on behalf of the firm only when they hold a top-management position or serve on the board of directors. Founders' activities within their organizations are also limited, as they have to coordinate with or even report to a hired manager. For example, one of the reasons why Steve Jobs initially left Apple was that he no longer had power to influence company strategy. A hired CEO, John Sculley, was in charge of the firm.

[2] Theoretically, some non-managing entrepreneurs may not work at all, but empirically we observe very few of such individuals, less than 2 percent of our sample. These are typically people who are retired or are temporarily out of the labor force, such as on parental or medical leave.

Learning his mistake, when Jobs founded a new company, NeXT, he became a founder-CEO instead of delegating managerial authority to someone else (Isaacson 2011).

Whether the founders are optimal managers for their firms strongly depends on how they solve the above dilemma. If entrepreneurs choose to retain managerial control of their firms in pursuit of non-pecuniary benefits, their choice is unlikely to be well aligned with firm performance. Prior studies suggest that this, indeed, may be the case in young, privately owned start-ups and family firms (Clarysse and Moray 2004; Kulchina 2016; Wasserman 2017). Moreover, highly skilled founders may refrain from managing their firms personally if they receive higher financial returns to their skills in alternative employment. They may become hybrid entrepreneurs (e.g., Folta et al. 2010), working full-time outside their start-ups and hiring agents to operate their own ventures. Alternatively, entrepreneurs' choice to operate the firm personally or hire a manager may be driven by the entrepreneurs' relevant knowledge and skills, such that more able founders will be more likely to run their firms personally. In summary, entrepreneurs' choices may be based on different motives, which would have different implications for firm performance. Whereas the skills motive is more strongly aligned with firm success, founders driven by the opportunity cost and non-pecuniary aspects may give up some firm profit in order to increase their personal income and achieve non-financial goals. That is why it is important to understand what motivates founders to retain control of their firms. The knowledge of entrepreneurs' motives for managing their firms personally will help shed additional light on the performance of the new ventures. Given the importance of top managers in young firms, poorly motivated manager choice may at least partially determine why the majority of new ventures fail in the first five years after founding (Campbell 2013; Small Business Administration 2014; Taylor 1999).

Despite the importance of the manager choice and the prevalence of non-managing founders, we still know little about entrepreneurs' motives for retaining operational control of their firms versus hiring a manager. The traditional view in the literature is that in the early years founders operate their firms themselves and may switch to hired managers later in the firm history, often under outside influence. Several recent studies have examined situations when founders resigned under the pressure from outside investors or after realizing that their skills and experience did not match the needs of their firms (Beckman and Burton 2008; Chen and Hambrick 2012; Chen and Thompson 2015; Clarysse and Moray 2004; Nelson 2003; Wasserman 2003; Wasserman 2017). Only a few studies have examined manager assignment in nascent firms, where the choice of manager is more likely to reflect the motives of founders rather than the influence of external investors. Those studies have focused on the entrepreneurial environment and have found that entrepreneurs are more likely to manage their firms in regions where they personally like to live (Kulchina 2016) and when industry conditions allow them to effectively govern relationships with their managers (e.g., Kulchina and Oxley 2017). Overall, prior studies provide little indication regarding the founders' motives in their decision to manage a firm personally, and their evidence is indirect at best.

We address this gap by taking a comprehensive approach to the determinants of the founders' choice of manager that are internal to the founder and the firm. We focus on the founders' relevant knowledge and skills, their opportunity cost of managing a firm personally, and the non-pecuniary benefits of owner-management. Below, we further elaborate on each of these potential motives.

Relevant knowledge and skills

The literature suggests that entrepreneurs with relevant experience and better education have more successful start-ups (Cooper et al. 1994; Hsu, 2007; Hvide and Moen 2010; Shane and Stuart 2002; van der Sluis and van Praag 2008). While these prior studies have typically focused on founder-managers and self-employed individuals, it is reasonable to believe that a founder's relevant knowledge and experience should benefit the ventures during both the founding process and firm management. Chang and Shim (2015) and Bennedsen et al. (2007), for example, demonstrate that education matters for professional managers of family firms. Indeed, more educated individuals have better knowledge about various aspects of life and science (van der Sluis and van Praag 2008). Longer education helps develop cognitive abilities and teaches commitment to problem-solving (Cooper et al. 1994). Through relevant prior experience founders build skills and tacit knowledge that cannot be learned otherwise (Campbell 2013; Dencker and Gruber 2015). Thus, experience in the target industry provides relevant knowledge about technology, operating processes, successful business strategies, consumers, suppliers, rivals, and government regulations (Dencker and Gruber 2015; Lazear 2005). Prior managerial and founding experiences help an individual learn how to operate a business, staff a firm, and build relationships with investors and other important stakeholders (Campbell 2013; Dencker and Gruber 2015; Shane and Stuart 2002). Experience in the region teaches an entrepreneur the specifics of the region, its consumption potential, and its supply pool (Santarelli and Vivarelli 2007). Moreover, prior experiences allow individuals to build relevant social capital that will help mobilize necessary resources while managing a young business (Dahl and Sorenson 2012; Roberts and Sterling 2012; Shane and Stuart 2002). Thereby, a founder with more relevant experience and longer education will likely make a better manager. Conversely, studies suggest that when entrepreneurs lack management skills and industry knowledge, they may benefit from hiring a manager with relevant business background (e.g., Muller and Murmann 2016). If entrepreneurs aim to maximize profit in their firms, they will be more likely to manage them personally if they have better education and relevant experiences. Otherwise, they will delegate managerial responsibilities to a hired agent who has necessary knowledge and skills.

Opportunity cost

An entrepreneur who operates the firm personally typically needs to spend more time addressing the firm's business matters than a non-managing founder, who hires a manager and is only involved in the high-level business decisions. Thus, to manage a firm, a founder will need to quit his or her previous job or reduce hours and effort that he or she puts into the outside employment (Hamilton 2000), resulting in lost or reduced income outside of the start-up. For some founders, the lost outside income may be compensated by the value increase in their firm, but for others it may not. This may be particularly true during early start-up years. The higher the entrepreneur's pre-founding salary, the more likely it is that the founder will not be able to fully compensate for it if he or she quits the outside job in order to devote himself or herself to managing the start-up (e.g., Campbell et al. 2012). Personal losses may also come in the form of reduced job stability or missed future opportunities of career advancement. For example, higher-paying and prestigious positions may be scarce, so future opportunities to find a similar-paying job may be limited, particularly after a break from regular employment (Folta et al. 2010). Also, losing a position at a large established firm may be more costly than quitting a job in a small business (Sorensen 2007). Finally, the loss may also come in the form of reduced leisure time, and some individuals may have very high relative value of leisure. Given such constraints, founders may be more likely to manage their firms personally when they have lower opportunity cost of management.

Non-pecuniary motives

Self-employment and owner-management may also be associated with a variety of positive nonfinancial returns. Such returns may include a satisfaction from the ability to do an interesting job and be one's own boss, a convenience of the schedule flexibility and ability to decide one's own working hours, a pleasure from running a family business, a sense of fulfillment from being "the king" and having control over firm operations and employees, and a satisfaction from the ability to choose a preferred employment location (Dahl and Sorenson 2012; Ehrhardt and Nowak 2003; Hamilton 2000; Moskowitz and Vissing-Jorgensen 2002; Wasserman 2017).

Prior studies have consistently reported that these and other nonfinancial returns play an important role in an individual's decision to become self-employed. Hamilton (2000) and Moskowitz and Vissing-Jorgensen (2002), for example, argue that nonfinancial benefits from self-employment are a major motivating factor for starting a business. Moreover, these and other studies have documented that when choosing an occupation, individuals may be willing to forgo some financial earnings in favor of nonfinancial returns. Stern (2004) argues that individuals with a preference for science accept employment with lower pay in return for the ability to participate in science. Hamilton (2000) compares earnings of self-employed individuals and paid employees and finds that an average individual earns less in self-employment than in paid employment, presumably because an entrepreneur is willing to sacrifice substantial monetary earnings in exchange for nonfinancial returns. Moskowitz and Vissing-Jorgensen (2002) demonstrate that, when adjusted for higher risks, entrepreneurship provides lower monetary earnings than regular employment, presumably because entrepreneurs are compensated with nonfinancial benefits. Surveys conducted among Italian entrepreneurs provide evidence that personal motivations rank above profit expectations in the decision to start a business (Santarelli and Vivarelli 2007). Benz and Frey (2008) and Blanchflower and Oswald (1998) also demonstrate that self-employed individuals rank nonfinancial benefits above financial returns among preferred characteristics of an occupation.

The best way to consume the non-pecuniary benefits of entrepreneurship to the full extent is by founding *and* managing the firm. When an entrepreneur does not manage the venture personally, he or she often works full-time at another company (Chen and Thompson 2015) and does not get full benefits of entrepreneurship, such as schedule flexibility, managing other people, autonomy, and doing interesting work. Entrepreneurs who work in their firms in non-management positions are also constrained in receiving such personal benefits because they need to report to or at least coordinate with a hired manager. Thus their autonomy and hours flexibility may be constrained by the hired CEO. In order to retain non-pecuniary benefits of management, founders may even be willing to accept lower firm performance.

Not all entrepreneurs, however, are equally sensitive to non-pecuniary returns to owner-management. Parents of small kids, for example, may value flexibility in work hours more strongly than single individuals (Hamilton et al. 2014). Also, entrepreneurs with greater financial stability, such as high family wealth or significant spousal income, may place higher value on non-financial benefits of owner-management. Individuals assigning higher value to the non-financial aspects of owner-management will be more likely to manage their firms personally, all else equal.

Data

Our dataset includes all private start-ups that were founded in Denmark between 2001 and 2009. We use four databases to construct our sample: the Board Database, the Firm Database, the Personal Database, and the Integrated Database for Labor Market Research (referred to by its Danish acronym, IDA). The databases draw from official national registers in Denmark and are maintained by Statistics Denmark. The statistics office collects annual information on all individuals residing in Denmark and all business entities registered in the country. It also provides individual and firm identifiers that allow linking individuals to firms that they have founded or where they are employed. IDA and other data collected by Statistics Denmark have been intensively used in academic research (e.g., Dahl and Sorenson 2012; Nanda and Sorensen 2010).

The Personal Database provides annual information on founders' demographic characteristics and backgrounds, such as gender, age, nationality, marital status, education, income, and kids. The Firm Database provides annual firm information, including accounting variables. The Firm Database excludes pseudo firms, i.e., businesses that were registered but never operated. The Board Database identifies the founders of each new firm together with other key individuals including members of the board of directors and top managers. The IDA provides annual employer-employee information and thus allows us to merge firm and founder data and track employer-employee relations over time. Together, these data provide a unique setting for investigating the characteristics of founders who manage their firms personally and those who do not. First, whereas prior studies have often been unable to observe founder's position in the start-up, our dataset allows us to identify whether the founder serves on the firm's top-management team or the board of directors, is employed in the firm at a non-management position, or is employed somewhere outside the start-up. We can also track founders' employment history over time, which gives us information about their relevant experience, prior occupation, and salary. Moreover, in addition to the entrepreneurs' personal characteristics, such as gender, nationality, age, and others, we can track down their family composition, which helps us identify whether any family members manage the start-up in place of the founder. Finally, we can effectively control for the characteristics of the new ventures, such as industry, location, founding year, and size.

In line with prior work (e.g., Kulchina 2016), we define an entrepreneurial firm as a small business owned by one or several individuals and employing up to 500 employees.[3] Also similarly to the prior studies (e.g., Dahl and Sorenson 2012), we limit our population of firms to the new ventures with at least one employee[4] and for which we have information on their founders and top managers. This allows us to exclude self-employed individuals without real firms, who are at a very low risk of hiring a manager. To avoid inactive ventures, we focus on the companies that meet the minimum functional requirements and appear in the Firm Database in the year of the firm's registration or the year after. We further reduce our population of start-ups to the firms founded by a single founder (76% of the sample). This allows us to focus on the binary choice between managing a firm personally and hiring a manager, rather than complicating it with the option of delegating firm management to a co-founder and having to account for the co-founders' characteristics and fit with the firm. Our final sample consists of 17,144 entrepreneurs and their firms. We observe these entrepreneurs in a cross-sectional dataset, where founders' characteristics are measured in the year of firm founding or, where appropriate, in the year

[3] Most of the firms in our sample (99%) have fewer than 50 employees, and when we limit our analysis to such firms, our results are identical to the findings from the complete sample.
[4] At least one employee in addition to the founder if the founder is also a top manager.

before, and the characteristics of their start-ups are captured in the year of founding or the year after, depending on when the firm started operating.[5]

Dependent Variable In line with the prior work (e.g., Kulchina 2016), our main dependent variable, ***founder-manager***, equals 1 when the founder serves on the top-management team of the new venture and 0 otherwise. In our sample, 10 percent of founders delegate firm operation to hired managers and 90 percent run their firms themselves.

Independent Variables

We broadly group variables into four categories: founder's characteristics that are likely to be positively associated with the extent of *relevant knowledge and skills*; founder's characteristics that are likely to reflect *opportunity cost* of management; and founder's characteristics that are likely to reflect greater preference for *non-pecuniary benefits* at the time of firm founding. We examine whether these characteristics have a significant association with the founder's decision to manage a firm personally as opposed to delegating managerial authority to a hired agent. Below we describe which variables are included in each category.

Relevant knowledge and skills: In line with prior studies (e.g., Dahl and Sorenson 2012; McKenzie and Woodruff 2016; Folta et al. 2010), we use six variables to capture the extent of the founder's relevant knowledge and skills: *education*, *ln(founding experience)*, *ln(management experience)*, *ln(broad industry experience), ln(related industry experience)*, and *ln(region tenure)*. We expect that the work experience variables, region tenure, and education will be positively associated with the founder's decision to manage the firm personally.

Opportunity cost: Since a founder often needs to quit his or her outside job or reduce work hours in order to manage a new firm, we use variables reflecting the value of the founder's recent occupation before founding to capture some opportunity cost of owner-management. Specifically, we focus on the most recent *salary*, prior *unemployment* status, and *parent-firm survival*.[6] We expect that prior salary size will

[5] We measure a founder's relevant experience (founding, top-management, and industry) in the 10 years preceding the start-up founding.

[6] Salary may also potentially capture some founder's skills but the possibility of this is reduced by controlling for the experience variables. Also prior studies demonstrate a negative effect of salary on the probability of transitioning into entrepreneurship. This suggests that the negative effect of opportunity costs captured by salary dominates any confounded positive effect of skills, particularly when skills are more directly accounted for by the experience variables.

be negatively associated with the probability of founder-management, whereas parent-firm death and unemployment status will be positively associated with it.

Non-pecuniary motives: We use two approaches to capturing non-pecuniary motives of entrepreneurs. Prior literature suggests that key non-pecuniary benefits of self-employment are autonomy and schedule flexibility (Hamilton 2000; Parasuraman and Simmers 2001). Entrepreneurship research has found that individuals with small kids assign particularly high value to schedule flexibility and autonomy (Boden, 1996). To proxy for the extent to which a founder may value work-schedule flexibility, we use the variable *small kids*. In line with the prior literature (e.g., Parasuraman and Simmers 2001), we define it as the number of kids 5 years or younger. Furthermore, Dahl and Sorenson (2012) report that individuals prefer to work and found firms in the municipalities where they live as they receive personal satisfaction from staying close to family and friends. In line with this logic, we expect that an individual whose employer is located farther from their place of living, i.e., in a different municipality, will benefit from switching from such a remote job to managing a start-up located close to home. To capture this, we use a dummy variable *distant parent firm*.

In addition to the proxy variables above, we use survey data that allows us to more closely capture the non-pecuniary motives of entrepreneurs. Individuals often become entrepreneurs in order to get autonomy and flexible work hours (Georgellis and Yusuf 2016; Hamilton 2000). In 2008, Statistics Denmark conducted a survey where it asked entrepreneurs who founded businesses in 2004 how important certain factors were for their decision to start a business. The survey included 201 entrepreneurs from our sample. They were asked about the importance of (1) "the desire to be my own employer" and (2) "the desire to decide the working hours" for their decision to start their own business. Respondents could answer "very important," "important," "not important," and "don't know." We construct two dummy variables, *autonomy* and *flexibility*, which equal 1 when an entrepreneur reported that these characteristics were very important or important for his or her decision to start a business and 0 otherwise. We anticipate a positive association between the desire for autonomy and flexibility and the probability of founder-management.

Control variables: In line with prior literature, we also control for a battery observed founder and firm characteristics that may be correlated with the choice of manager and any of our variables of interest.

Descriptive Statistics

Table 1 provides descriptive statistics for key variables.

Insert Table 1 about here

We observe that founders who manage their firms personally are quite different from the founders who do not. On the basic demographic characteristics, founder-managers are 21 percentage points more likely to be male and 3 percentage points less likely to be married. In addition, managing entrepreneurs have more small kids, which may lead to their higher preference for flexibility and autonomy. Founder-managers are also less likely to own other start-ups but are 7 percentage points more likely to have parents who have also been entrepreneurs. Founder-managers have higher non-wage income and their spouses earn more, but their family wealth is still the same as for non-managing founders. Founder-managers are less likely to have worked for a distant parent firm. Their previous employer is smaller, younger, and more profitable, but surprisingly also more likely to exit in the near future. Moreover, managing founders have lower salary prior to founding the start-up. Together with the higher probability of the parent-firm death, these observations point to the lower opportunity cost of management for founders who choose to manage their firms personally. Founder-managers are also more experienced than non-managing entrepreneurs, which suggests that they likely have better knowledge and skills.

Empirical Model

Our empirical analysis consists of two main parts. In the first part, we examine how entrepreneurs who manage their firms personally are different from those who delegate firm operations to a hired manager. We determine whether observed patterns are consistent with any of the motivations for retaining management position that have been proposed in the theoretical section. In the second part, we explore what founders do when they choose not to operate their firms personally, i.e., whether they serve on the start-up's board of directors and whether they work outside of their firms or are employed at a non-management position in their own ventures.

To examine how our key independent variables are associated with the founders' decision to manage their firms personally, we estimate a set of Probit models with the dependent variable, $founder - manager_i$. This variable is a dummy that equals 1 when the founder serves on the top-management team of the firm and 0 otherwise.

Founder-Managers Versus Non-managing Founders

Tables 2 and 3 estimate the probability that a founder will manage a firm personally rather than delegate firm management to hired agents. Table 2 shows the baseline model with main control variables. Table 3 focuses on the key independent variables associated with the three motives for founder-management, i.e., relevant skills, opportunity cost, and non-pecuniary benefits. Model 2 of Table 2 and Model 5 of Table 3 report marginal effects of changing independent variables by one unit from the mean.

Insert Table 2 about here

The results for the key control variables suggest that compared to non-managing entrepreneurs, founders who manage their firms personally are younger, more likely to be male, less likely to be married, and less likely to own other start-ups, and their parents are more likely to be former or current entrepreneurs.

Small but positive coefficients for firm size and founder's non-wage income and a positive association between founder-management and the number of top managers contradict the idea that entrepreneurs operate their firms personally because they cannot afford to hire a manager—if that were true, we would have observed wealthier entrepreneurs and founders of larger firms being less likely to run their firms themselves, which is contrary to our findings.

Insert Table 3 about here

Models 1 and 4 of Table 3 point to a consistent positive association between the likelihood of founder-management and the entrepreneur's top-management experience, industry experience, and municipality tenure. Municipality tenure and related (four-digit) industry experience seem to be the most impactful on the founder's decision to run a firm personally, whereas broad industry experience and top-management experience are less important. Thus, moving from no experience to 10 years of experience (or moving one standard deviation above the mean) is associated with 8.3 (2.2) percentage point increase in the probability of founder-management for municipality tenure; 7.2 (2.5) for related industry experience; 3.2 (1.1) for the broad industry experience; 2.5 (0.6) for the top-management experience; and 4.1 (0.9) for the general work experience.[7]

The impact of entrepreneurial experience is less consistent. The positive association observed in Model 1 disappears once we add other characteristics of entrepreneurs. These findings are, however, consistent with prior studies that have found mixed results for the impact of prior founding experience on firm success (Roberts et al. 2013; Shane and Stuart 2002; Campbell 2013).

[7] The magnitudes of the effects are reported from Model 5 (other variable are taken at their means) and additional calculations by the authors based on Model 4 (available on request).

Also, contrary to our expectations, we find that founders with more years of education seem less likely to run their firms personally. These findings may be due to education capturing both relevant skills and some opportunity cost of management (perhaps long-term career prospects, which are not accounted for by the prior salary). More educated individuals have better knowledge, skills, problem-solving ability, and motivation. Therefore, they will be better at coping with problems. However, they may also have better outside opportunities and long-term career expectations, which would lead to higher opportunity cost of owner-management (Cooper et al. 1994). If the opportunity-cost effect dominates the skills effect, the net impact of education on the founder's management choice will be negative.

Overall, however, our findings in Models 2 and 5 are largely in line with the expectation that entrepreneurs' decision to operate their firms personally is motivated, at least partially, by their relevant knowledge and skills obtained through prior work and region experience.

Models 2 and 4 examine whether founders who presumably have higher opportunity cost of management are less likely to run their firms themselves and more likely to use hired managers. Our results for the founder's salary prior to founding a firm are consistent with this idea. Moving one standard deviation above the mean in salary is associated with a 1.3 percentage point decrease in the probability of founder-management. Working in an organization that stopped existing soon after the start-up founding is associated with a 3.5 percentage point increase in the probability of having a managing founder. Interestingly, unemployment does not seem to have a significant impact on the decision to manage a firm personally. This suggests that individuals who are more likely to be need-based entrepreneurs are not rushing into managing their firms. The lack of significant finding may be due to previously unemployed entrepreneurs having lower abilities (Taylor 1999) but realizing such a limitation and hiring agent-managers whenever necessary. The positive opportunity-cost effect and the negative ability effect thus compensate each other.

Finally, Models 3 and 4 address the issue of non-pecuniary motives. We find that entrepreneurs with small kids are more likely to manage their firms personally. Interestingly, the coefficient for the distant parent firm is initially negative, but turns positive (the expected direction) in the complete model, which controls for a larger number of entrepreneur's characteristics. The effect size of working at a distant parent firm is 1.1 percentage points.

To further investigate the impact of non-pecuniary benefits, we turn to the survey responses and examine whether individuals who are strongly motivated to become entrepreneurs by the desire to become own employer and the desire to decide the working hours are more likely to manage their firms personally, since firm management presumably gives them better opportunity to gain such nonpecuniary benefits of entrepreneurship. Since only a small part of our sample participated in the survey, we limit the number of control variables that we use in these models to the key demographic characteristics. The coefficient for autonomy in Table 4 is positive but not statistically significant at any conventional level. The coefficient for flexibility is positive and significant. Founders who are strongly attracted to self-employment by the desire to decide the working hours are 7.4 percentage points more likely to manage their firms personally.

Insert Table 4 about here

Taken together, our findings for the number of small kids, distant prior employment, and the significance of schedule flexibility are consistent with the idea that founders who value non-pecuniary benefits of entrepreneurship higher than others are more likely to manage their firms personally.

In summary, our findings suggest that all three motives (relevant knowledge and skills, opportunity cost, and non-pecuniary benefits) play a role in the entrepreneurs' decision to manage a firm personally rather than delegate firm operation to hired managers. The magnitudes of the effects are economically significant. And while the impact of non-pecuniary factors seems relatively strong, the effects of relevant knowledge and skills and opportunity cost are comparable in size to the impact of non-pecuniary motives.[8]

What Do Non-managing Founders Do?

The final question that we want to explore in our study is what founders do when they do not manage their firms personally. We focus on two types of activities. First, we examine whether non-managing founders are likely to serve on the board of directors. Second, we examine whether non-managing founders work outside of their firms or are employed at non-management positions inside their own ventures.

Joining the board of directors

While being on the board does not perfectly substitute for being a CEO of the firm, it can give a non-managing founder more control over the firm and more non-pecuniary benefits of control than having no formal leadership position in the start-up.

[8] In additional analyses, we further examined whether certain motives are more or less important for certain groups of entrepreneurs. We find that the motives for managing a firm personally are largely the same for entrepreneurs in high-technology and low-technology sectors and for male and female founders and for entrepreneurs who hire family and non-family managers. Estimations are available upon request.

In general, 19 percent of firms in our sample had boards of directors at the time of founding. The average number of board members is 3, but the number can range from 1 to 15. In line with our expectations, firms with non-managing founders are more likely to have boards of directors (39% versus 17% for firms with founder-managers).

We expect that non-managing founders serving on the board of directors can significantly impact the strategy of the firm; therefore, their skills are important. However, non-managing founders joining the board do not need to give up alternative employment and do not have work-schedule flexibility or full autonomy. Therefore, opportunity cost and non-pecuniary benefits should play a small role in motivating non-managing founders to join a board of directors.

In Model 1 of Table 6, we examine how non-managing founders who serve on the board of directors differ from the ones who do not.[9] Having longer relevant work experience (entrepreneurial, top-management, and industry) has a positive association with serving on the board, whereas region tenure reduces the probability of being on the board of directors. The negative association with the region tenure is perhaps due to the fact that founders with local experience may find it easier to engage other qualified local experts to take their place on the board.

Non-managing founders who serve on the board also have higher prior salary, more small kids, are more likely to be male. The positive coefficient for salary is likely driven by the fact that since founders do not need to quit their alternative employment to join the board, prior salary is capturing just the positive impact of skills, rather than the net of the opportunity cost and skills. Firms where non-managing founders serve on the board have more employees at entry (average difference is 3 employees), but slightly fewer top managers (the average difference is only 0.02 people).

Insert Table 6 about here

Consistent with our predictions, these results imply that the decision to join the board is driven more heavily by relevant knowledge and skills, whereas opportunity cost and non-pecuniary benefits play a smaller or no role at all in this decision. This is different from the decision to manage a firm, which is driven by all three motives. We observe such a difference presumably because managing founders have to give up or reduce their alternative employment but gain some non-pecuniary benefits, whereas non-managing founders joining the board do not need to give up their alternatives jobs, but gain less in non-

[9] Here we include firms with and without boards of directors, assuming that the founder can always build the board if he wants to join one. However, our results also hold if we limit our sample to firms that already have boards of directors at the time of observation and examine whether the founder serves on that board.

pecuniary benefits than they would receive through firm management. Moreover, we observe that different types of relevant experience have different importance for the decision to manage and firm and for the decision to join the board. The top-management experience and founding experience are significantly more important for the decision to join the board than the decision to manage a firm. This is perhaps due to the fact that members of the board are more engaged in the high-level business-strategy decisions where the prior entrepreneurial and top-management experiences have the highest value.

In Model 4, we turn our attention to founder-managers and examine whether their choice to join the board of directors is motivated by the same factors as for non-managing founders. This is indeed the case, and, with a few exceptions, our findings for founder-managers and non-managing founders are very similar for founder-managers.

Alternative employment

Finally, we would like to examine whether non-managing founders still work in their own firms at non-management positions or hold primary employment outside of their firms. To do so, we examine primary occupation of non-managing founders one year after they have founded their firms (t+1). If a founder holds a formal position inside or outside his or her firm, such position is typically listed as the founder's primary occupation. We have also examined secondary occupations of founders, but none of the founders lists a secondary occupation other than "being an entrepreneur" or "being outside of the labor force."[10]

Among non-managing founders, 38 percent are employed in their firms in non-management positions, 60 percent work outside their firms, and the remaining 2 percent are out of the labor force. For comparison, only 15 percent of founder-managers have another job outside of their start-ups. Based on the prior literature, entrepreneurs who also hold jobs outside of their firms can be considered hybrid entrepreneurs (e.g., Folta et al. 2010). While we do not observe exact job titles of entrepreneurs who work outside of their firms, we know whether they work as blue-collar, white-collar, or top-management employees, or if they are listed as founders of other ventures. Table 7 reports occupational distributions of managing and non-managing founders who work outside of their start-ups or are outside the labor force (typically, on leave from formal employment or retired). We can see that non-managing founders are more likely to have white-collar and top-management jobs, whereas founder-managers who also work outside their firms are more likely to hold blue-collar positions in outside organizations.

Insert Table 7 about here
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[10] This is equivalent to having no secondary occupation.

In Models 2 and 3 of Table 6, we examine which non-managing founders are more likely to work at non-management positions inside their own start-ups and which non-managing founders are more likely to work in other organizations. Our dependent variable equals 1 when the non-managing founder works in his or her start-up and 0 when he or she works in some other organization.[11] We exclude from our estimation sample 37 non-managing founders who do not work anywhere (outside of the labor force); they constitute 2 percent of all non-managing founders.

Overall, our results imply that non-managing founders prefer to work outside when they have more stable and more lucrative prior employment and higher level of general skills, but are more likely to work in their start-ups when they have better industry-specific skills and their firms are larger and operate in the high-technology sector. In terms of non-pecuniary benefits, we did not find any significant association between the number of small kids or distant parent firm and the probability of working in the start-up. However, we have observed that 43 percent of non-managing founders who value schedule flexibility work in their start-ups as opposed to 10 percent of non-managing founders who assign low value to such flexibility.

In sum, these findings suggest that the factors motivating non-managing founders' decision to work in their firms versus outside are quite similar to the motives of the original decision of whether to manage the start-up personally or not. One key difference is that whereas unemployed individuals do not rush to manage their firms personally, they still have a stronger tendency to work in their firms at non-management positions than founders with more stable prior employment. The same is true for the founders of high-technology ventures. They are no more likely to manage their firms personally than the founders of low-technology start-ups, but they are significantly more likely to work in their firms at non-management positions. Prior salary also seems to play a greater role in the decision to work in own firm. This suggests that the opportunity costs are even more important for the decision to join own start-up than the decision to operate it. Conversely, region tenure seems to play a less significant role, perhaps since local social capital of founders matters less when they just work in their start-ups versus manage them.

In Models 5 and 6, we focus on founder-managers and examine what motivates them to work just in their own start-ups versus taking a second job somewhere outside. The findings for the opportunity cost and non-pecuniary motives are similar to the ones for non-managing founders. Thus, for example, founder-managers with higher opportunity cost of management are more likely to take another job outside of their firms. The impact of relevant experience is even more pronounced than for non-managing founders: Founder-managers with greater industry and region experience are more likely to work only in

[11] In theory, non-managing founders could do both, but empirically we observe no cases of non-managing founders who simultaneously hold a formal position in their own start-up and work in an outside organization.

their firms, whereas founder-managers with greater top-management experience are more likely to seek outside jobs.

Conclusion

The business literature has long been concerned with the questions of why people found new firms and what makes their ventures successful. The key person in the firm is the founder, and the success of the firm depends not just on the quality of the founder's business idea, but also on the founder's engagement with the firm after its founding. One of the most important roles that a founder can play in a start-up is the role of the top manager. However, founders are being criticized for taking such a role to gain personal non-pecuniary benefits, even when they are not the best managers for their ventures (e.g., Wasserman, 2017).

In our paper, we have examined more closely which factors may motivate the founder to operate the firm personally versus to delegate firm management to a hired agent. Our findings are consistent with the idea that while non-pecuniary motives play a role in the decision to manage a firm personally, relevant knowledge and skill and opportunity cost are also important drivers of the entrepreneur's choice. These findings imply that founders are, perhaps, more strongly motivated by firm performance and their overall financial income than suggested by the prior literature. However, since owner-management choice is not solely driven by the founders' relevant experience, their decision to operate the firm personally is not perfectly aligned with the start-up performance. Thus, founders with high opportunity cost of management may avoid managing their firms personally even when they would be good managers for their firms, whereas entrepreneurs who assign high value to the flexibility of work hours may operate their ventures themselves even when they are not best managers for their businesses.

As a next step, we have investigated what founders do when they do not manage their firms personally. First, we have studied their choice to join the new firm's board of directors. Our results are in line with the notion that founders' relevant experience is an important driver of this decision. However, whereas management choice is significantly driven by the related industry experience and region tenure, the decision to join the board is more heavily based on the founder's top-management experience. Moreover, since entrepreneurs do not need to quit their alternative employment to join the board, their prior salary and the stability of prior employment do not play a role in their decision to join the board.

Finally, we examine whether non-managing founders work outside of their start-ups or are employed in their own firms at non-management positions. We find that all three motives—relevant knowledge and skills, opportunity cost, and non-pecuniary benefits—play a role in the non-managing founder's decision to work in his or her own firm rather than take a job in an outside organization.

From the theoretical point of view, our results are consistent with the notion that entrepreneurs are more likely to manage their firms personally when they have better relevant skills, have low opportunity cost of management, and value non-pecuniary benefits of owner-management, such as schedule flexibility. In future work, however, it would be useful to examine how much of the firm profit they are willing to give up to gain non-financial benefits of owner-management and to retain their alternative employment. It would also be helpful to further explore under which conditions founders may be more or less heavily driven by different motives of owner-management. Whereas we have examined the heterogeneity of founder types and firm technology intensity, the relative importance of management motives may also depend on the institutional environment of start-ups. For example, in countries with no public health insurance and lower social security benefits, the negative impact of opportunity cost on the founder-management choice may be stronger. In countries with high family values, the positive impact of non-pecuniary benefits, such as schedule flexibility, may be more significant. However, while we would welcome replication of our findings in other institutional environments, we expect that on the theoretical level our results would still be important even if the magnitudes of the effect may vary in other settings.

Taken together, our findings make several contributions to the entrepreneurship literature and open multiple areas for future research. First, we draw attention to the issue of separation of ownership and control and management of young small businesses founded by entrepreneurs. While the literature has primarily assumed that such a separation typically happens later in the firm history, often under the pressure of the outside stakeholders (e.g., Beckman and Burton 2008; Chen and Hambrick 2012; Wasserman 2017), our paper is one of the first to demonstrate that a significant share of founders delegate managerial control of their firms to hired agents from the time of founding. We also show that entrepreneurs are systematically different in regard to this decision. Moreover, our study informs growing research on hybrid entrepreneurs (e.g., Folta et.al. 2010)—individuals who found start-ups while continuing to hold outside employment—since the majority of the non-managing founders can be considered hybrid entrepreneurs.

Second, our findings speak to the debate on pecuniary and non-pecuniary motives of entrepreneurs (e.g., Gomez-Mejia et al. 2007; Hamilton 2000; Wasserman 2017) by demonstrating that in their decision to operate the firm personally entrepreneurs are also heavily driven by strategic considerations that are aligned with firm performance and personal wealth. One of the limitations of the current study is that we do not directly observe founders' motives but infer them from the founders' demographic characteristic and backgrounds. In future work, it may be helpful to do a survey of entrepreneurs, which would allow researchers to develop a more nuanced understanding of the founders' motivation to run a firm personally or delegate firm operation to a hired agent.

Moreover, while prior empirical studies sometimes counted every person present in the firm or managing it in its early years as an entrepreneur (e.g., Sorensen 2007), our study suggests that this may be a risky approach. Some of these people may be hired managers and their characteristics may be significantly different from the characteristics of real founders. Also, some of the true entrepreneurs may be omitted from the analysis. Such an approach may bias our understanding of which individuals are more likely to become entrepreneurs.

Finally, our work has implications to the literature on human capital in established organizations (e.g., Campbell et al. 2012). Established firms often hesitate to encourage their employees to be creative and entrepreneurial in the fear that employees will leave to start their own ventures. Our findings suggest that not all employees who start their firms will leave their prior employers. If we believe that salary is positively correlated with skills and value, more skillful and valuable employees are less likely to leave their employers even after founding own ventures.

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Table 1. Descriptive Statistics

Variable	(1) All Mean	(2) All S.D.	(3) Founder-managers Mean	(4) Founder-managers S.D.	(5) Non-managing founders Mean	(6) Non-managing founders S.D.	(7) (3) - (5) Difference in means
Founder-manager	0.90	0.30					
Education	13.20	2.39	13.19	2.35	13.35	2.72	-0.1581***
Ln(founding experience)	1.13	0.98	1.16	0.97	0.80	0.98	0.3610***
Ln(management experience)	0.12	0.40	0.12	0.40	0.12	0.42	-0.0074
Ln(broad industry exp)	0.42	0.74	0.43	0.75	0.28	0.65	0.1577***
Ln(related industry exp)	1.01	1.00	1.08	1.00	0.40	0.78	0.6724***
Ln(region tenure)	1.72	0.97	1.76	0.94	1.27	1.12	0.4934***
Ln(work experience)	2.50	0.69	2.49	0.68	2.53	0.72	-0.0411**
Ln(salary)	6.83	6.16	6.54	6.17	9.48	5.31	-2.9379***
Ln(unemployment duration)	0.14	0.64	0.13	0.63	0.19	0.75	-0.0556***
Parent-firm death	0.51	0.50	0.54	0.50	0.25	0.43	0.2920***
Ln(parent-firm size)	2.61	2.32	2.50	2.24	3.59	2.81	-1.0897***
Parent-firm ROA	23.81	32.44	24.75	33.09	15.28	24.14	9.4665***
Ln(parent-firm age)	2.20	0.99	2.18	0.99	2.41	1.01	-0.2327***
Small kids	0.37	0.67	0.38	0.67	0.27	0.59	0.1113***
Big kids	0.78	0.99	0.77	0.99	0.81	1.02	-0.0361*
Distant parent firm	0.31	0.46	0.30	0.46	0.39	0.49	-0.0885***
Ln(age)	3.69	0.25	3.68	0.24	3.72	0.28	-0.0395***
Female	0.16	0.37	0.14	0.35	0.35	0.48	-0.1643***
Married	0.63	0.48	0.63	0.48	0.66	0.47	-0.0329***
Danish	0.98	0.15	0.98	0.15	0.97	0.16	0.0015
Multiple start-ups	0.35	0.48	0.34	0.47	0.39	0.49	-0.0547***
Ln(non-wage income)	10.13	4.44	10.28	4.38	8.80	4.76	1.4776***
Ln(spouse income)	10.08	4.88	10.10	4.86	9.88	5.05	0.2254**
Ln(family wealth)	14.00	2.01	14.00	1.97	13.95	2.35	0.0537
Parent entrepreneur	0.37	0.48	0.38	0.49	0.31	0.46	0.0722***
Ln(employees)	1.03	1.02	1.06	1.02	0.79	1.01	0.2735***
On board	0.16	0.37	0.15	0.36	0.30	0.46	-0.1497***
N managers	1.08	0.30	1.08	0.30	1.08	0.31	-0.0026
N obs.	17,144		15,449		1,695		

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2. Baseline Model with Main Control Variables

	(1)	(2)
Variable	Baseline	Marginal effects
Dependent variable	Founder-manager	
Ln(age)	-0.272***	-0.036***
	(0.073)	(0.010)
Female	-0.760***	-0.145***
	(0.036)	(0.009)
Married	-0.124***	-0.016***
	(0.040)	(0.005)
Danish	-0.110	-0.014
	(0.094)	(0.011)
Multiple start-ups	-0.199***	-0.028***
	(0.031)	(0.005)
Ln(non-wage income)	0.033***	0.004***
	(0.003)	(0.000)
Ln(spouse income)	0.009**	0.001**
	(0.004)	(0.000)
Ln(family wealth)	0.006	0.001
	(0.008)	(0.001)
Parent entrepreneur	0.134***	0.017***
	(0.031)	(0.004)
Ln(employees)	0.209***	0.028***
	(0.018)	(0.002)
On board	-0.661***	-0.121***
	(0.037)	(0.009)
N managers	0.115**	0.015**
	(0.052)	(0.007)
Constant	1.967***	
	(0.335)	
Region (98 dummies)	Yes	Yes
Industry (80 dummies)	Yes	Yes
Entry year (9 dummies)	Yes	Yes
N	17,144	17,144
pseudo R^2	0.150	

All regressions are Probit models. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3. Founder-Managers Versus Non-managing Founders

	(1)	(2)	(3)	(4)	(5)
Variable	Skills	Opportunity cost	Non-pecuniary benefits	All	Marginal effects
Dependent variable			Founder-manager		
Education	**-0.027*****			**-0.025*****	**-0.003*****
	(0.007)			**(0.007)**	**(0.001)**
Ln(founding experience)	**0.126*****			**-0.011**	**-0.001**
	(0.024)			**(0.029)**	**(0.003)**
Ln(management experience)	**0.132*****			**0.132*****	**0.014*****
	(0.038)			**(0.039)**	**(0.004)**
Ln(broad industry exp)	**0.176*****			**0.158*****	**0.016*****
	(0.023)			**(0.024)**	**(0.002)**
Ln(related industry exp)	**0.361*****			**0.313*****	**0.032*****
	(0.020)			**(0.020)**	**(0.002)**
Ln(region tenure)	**0.257*****			**0.267*****	**0.027*****
	(0.016)			(0.016)	(0.002)
Ln(work experience)	0.137***			0.127***	0.013***
	(0.026)			(0.027)	(0.003)
Ln(salary)		**-0.014*****		**-0.020*****	**-0.002*****
		(0.004)		**(0.005)**	**(0.000)**
Ln(unemployment duration)		**-0.004**		**0.011**	**0.001**
		(0.022)		**(0.023)**	**(0.002)**
Parent-firm death		**0.466*****		**0.340*****	**0.035*****
		(0.040)		**(0.040)**	**(0.004)**
Ln(parent-firm size)		-0.025***		-0.018**	-0.002**
		(0.007)		(0.008)	(0.001)
Parent-firm ROA		0.000		0.000	0.000
		(0.001)		(0.001)	(0.000)
Ln(parent-firm age)		-0.023		-0.024	-0.002
		(0.016)		(0.016)	(0.002)
Small kids			**0.108*****	**0.115*****	**0.012*****
			(0.027)	**(0.028)**	**(0.003)**
Big kids			0.009	0.009	0.001
			(0.016)	(0.017)	(0.002)
Distant parent firm			**-0.186*****	**0.111*****	**0.011*****
			(0.032)	**(0.036)**	**(0.003)**
Constant	2.799***	2.251***	1.712***	2.259***	
	(0.370)	(0.347)	(0.352)	(0.392)	
Control variables	All variables included in Table 2 (including industry, region, and founding year dummies)				
N	17,144	17,144	17,144	17,144	17,144
pseudo R^2	0.228	0.184	0.154	0.245	0.245

All regressions are Probit models. Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4. Non-pecuniary Motives: Autonomy and Flexibility

	(1)	(2)
Variable	Autonomy	Flexibility
Dependent variable	Founder-manager	
Autonomy	**0.131**	
	(0.360)	
Flexibility		**0.498****
		(0.249)
Ln(age)	-1.507***	-1.546***
	(0.535)	(0.578)
Female	0.232	-0.040
	(0.330)	(0.328)
Married	-0.045	0.121
	(0.304)	(0.299)
Constant	6.863***	6.744***
	-2.141	-2.113
N	199	201
pseudo R^2	0.056	0.088

All regressions are Probit models. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6. What Do Non-managing Founders Do?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Non-managing founders			Managing founders			Non-managing vs. managing	
Variable	On board	Working in own firm vs. outside		On board	Working in own firm only vs. also working outside		(1) vs. (4)	(3) vs. (6)
Dependent variable	On board	Working in own firm	Working in own firm	On board	Working in own firm only	Working in own firm only		
Education	-0.031^{*}	-0.070^{***}	-0.063^{***}	0.006	0.000	0.022^{***}	**	***
	(0.016)	(0.017)	(0.016)	(0.007)	(0.007)	(0.006)		
Ln(founding exp)	0.154^{**}	-0.173^{**}	-0.147^{**}	0.093^{***}	-0.258^{***}	-0.288^{***}	ns	*
	(0.067)	(0.075)	(0.071)	(0.027)	(0.027)	(0.027)		
Ln(management exp)	0.401^{***}	0.146	0.156	0.132^{***}	-0.084^{**}	-0.084^{**}	***	**
	(0.095)	(0.098)	(0.095)	(0.034)	(0.035)	(0.034)		
Ln(broad industry exp)	0.101^{*}	0.066	0.101^{*}	-0.031	0.177^{***}	0.188^{***}	**	ns
	(0.059)	(0.061)	(0.058)	(0.020)	(0.021)	(0.020)		
Ln(related industry exp)	0.224^{***}	0.430^{***}	0.394^{***}	0.001	0.271^{***}	0.279^{***}	***	**
	(0.055)	(0.060)	(0.055)	(0.017)	(0.017)	(0.016)		
Ln(region tenure)	-0.116^{***}	0.049	0.041	-0.068^{***}	0.110^{***}	0.119^{***}	ns	*
	(0.039)	(0.042)	(0.040)	(0.017)	(0.016)	(0.016)		
Ln(work experience)	0.088	-0.280^{***}	-0.259^{***}	0.010	0.052^{*}	0.033		
	(0.074)	(0.082)	(0.079)	(0.025)	(0.027)	(0.026)		
Ln(salary)	0.024^{**}	-0.057^{***}	-0.048^{***}	-0.012^{***}	-0.044^{***}	-0.045^{***}	***	ns
	(0.011)	(0.012)	(0.011)	(0.004)	(0.004)	(0.004)		
Ln(unemployment duration)	0.075	0.099^{*}	0.098^{*}	-0.019	0.063^{**}	0.053^{**}	ns	ns
	(0.055)	(0.055)	(0.053)	(0.028)	(0.025)	(0.024)		
Parent-firm death	-0.085	0.440^{***}	0.442^{***}	0.005	0.410^{***}	0.443^{***}	ns	*
	(0.100)	(0.100)	(0.095)	(0.034)	(0.036)	(0.035)		
Ln(parent-firm size)	-0.057^{***}	-0.075^{***}	-0.079^{***}	0.016^{*}	-0.055^{***}	-0.052^{***}		
	(0.019)	(0.020)	(0.019)	(0.034)	(0.008)	(0.008)		
Parent-firm ROA	-0.004^{**}	-0.000	-0.000	-0.002^{***}	0.001^{**}	0.001^{**}		
	(0.002)	(0.002)	(0.002)	(0.000)	(0.001)	(0.001)		
Ln(parent-firm age)	0.105^{**}	0.064	0.072	0.055^{***}	0.068^{***}	0.071^{***}		
	(0.046)	(0.047)	(0.045)	(0.017)	(0.016)	(0.016)		
Small kids	0.145^{**}	0.007	0.016	-0.047^{**}	0.007	0.020	***	ns
	(0.070)	(0.075)	(0.070)	(0.023)	(0.024)	(0.024)		
Big kids	-0.097^{**}	-0.059	-0.049	0.010	-0.022	-0.015		
	(0.042)	(0.046)	(0.043)	(0.014)	(0.015)	(0.015)		
Distant parent firm	-0.153^{*}	-0.086	-0.056	-0.043	0.115^{***}	0.125^{***}	ns	ns
	(0.088)	(0.092)	(0.087)	(0.037)	(0.035)	(0.035)		
High-technology			0.451^{***}			0.200^{***}		ns
			(0.141)			(0.064)		
Constant	-0.253	1.756^{*}	1.164	-1.199^{***}	1.926^{***}	1.473^{***}		
	(0.924)	(0.977)	(0.857)	(0.365)	(0.372)	(0.339)		
Control variables	All variables included in Table 2 (including industry, region, and founding year dummies)							
N	1,695	1,552	1,552	15,449	14,666	14,666		
pseudo R^2	0.242	0.292	0.260	0.170	0.198	0.175		

Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. *ns* stands for non-significant at any conventional level.

Table 7. Occupation Type for Founders Who Work Outside of Their Firms or Are Outside of the Labor Force

Occupation type	Non-managing founders	Managing founders
Blue-collar	41%	51%
White-collar	29%	20%
Top manager	25%	24%
Entrepreneur	2%	2%
Outside of the labor force	3%	3%
N obs.	1,043	2,266